

TABLE OF CONTENTS

Preface	1
On the use of hierarchical models in engineering analysis <i>K.J. Bathe, N.-S. Lee and M.L. Bucelem</i>	5
A discourse on the stability conditions for mixed finite element formulations <i>F. Brezzi and K.J. Bathe</i>	27
A posteriori error estimation <i>R.E. Ewing</i>	59
Parallel computation with adaptive methods for elliptic and hyperbolic systems <i>M. Benantar, R. Biswas, J.E. Flaherty and M.S. Shephard</i>	73
The three R's of engineering analysis and error estimation and adaptivity <i>O.C. Zienkiewicz and J.Z. Zhu</i>	95
Factors affecting reliability of computer solutions with hierarchical single surface constitutive models <i>C.S. Desai, G.W. Wathugala, K.G. Sharma and L. Woo</i>	115
The use of a priori estimates in engineering computations <i>B.A. Szabó</i>	139
The problem of modeling the elastomechanics in engineering <i>I. Babuška</i>	155
A posteriori error analysis in finite elements: The element residual method for symmetrizable problems with applications to compressible Euler and Navier-Stokes equations <i>J.T. Oden, L. Demkowicz, W. Rachowicz and T.A. Westermann</i>	183
A priori estimates for mixed finite element methods for the wave equation <i>L.C. Cowsar, T.F. Dupont and M.F. Wheeler</i>	205
Accuracy and adaptivity in the numerical analysis of thin-walled structures <i>L. Plank, E. Stein and D. Bischoff</i>	223

Framework for the reliable generation and control of analysis idealizations <i>M.S. Shephard, P.L. Baehmann, M.K. Georges and E.V. Korngold</i>	257
Mixed finite element methods for elliptic problems <i>D.N. Arnold</i>	281
Adaptive finite element methods for diffusion and convection problems <i>C. Johnson</i>	301
A posteriori error estimates for the Stokes equations: A comparison <i>R.E. Bank and B.D. Welfert</i>	323
Predictor-corrector procedures for stress and free vibration analyses of multilayered composite plates and shells <i>A.K. Noor, W.S. Burton and J.M. Peters</i>	341
Adaptive grids for coupled viscous flow and transport <i>K.C. Wang and G.F. Carey</i>	365
Author Index	385
Subject Index	387
Instructions to Authors	389

